CEADO E37S AND E92
A CLOSER LOOK

© Bella Barista
Bella Barista, Nene Court, The Embankment, Wellingborough, Northants, NN8 1LD
Tel: 01933 273275 e-mail: claudettep@towability.com

INTRODUCTION & SPECIFICATIONS 3

Finish and Packaging 4
QUALITY CONTROL 4
GENERAL OPERATION 5
Noise Levels 5
Ease of use 5
Grind adjustment 6
Dosing 7
Single Dosing 7
Grind Retention 7
Dose Accuracy 8
GRIND QUALITY 8
GRINDER MAINTENANCE 9
WHAT COULD BE IMPROVED 10
"Pulse Off" setting auto reset 10
Electronics Bypass 10
Hex Head Machine Screws 10
Protective clear plastic disk around start button 11
Supply with or without hopper (option) 11
Clearer numerals for grind settings 12
Longer non commercial warranty 12
Better on/off switch 12
DIMENSIONS(WITH MAZZER MINI HOPPER) 12
CONCLUSION 12

CEADO E92 (71MM CONICAL BURRS) 13

Finish and Packaging 13
QUALITY CONTROL 13
GENERAL OPERATION 13
Noise Levels 13
Ease of use 13
Grind adjustment 13
Dosing 13
Single Dosing 13
Grind Retention 14
Dose Accuracy 15
GRIND QUALITY 15
GRINDER MAINTENANCE 15
DIMENSIONS 15
INITIAL CONCLUSIONS 16
So E37S (83mm flat) or E92 (71mm conical), are you buying either of them and why? 16
CEADO E92 MODIFICATION 17
THE PROCEDURE FOR SINGLE DOSING THE CEADO E92 18
Single Dosing Grind Quality (post modification) 20
CONCLUSION 20

© Bella Barista
Bella Barista, Nene Court, The Embankment, Wellingborough, Northants, NN8 1LD
Tel: 01933 273275 e-mail: claudettep@towability.com

Introduction & Specifications

Ceado manufacture a number of grinders at various price points. This review is limited to the two high end "on demand grinders". Bella Barista are looking to fill a gap in the top end of their range and these two grinders were selected as potential candidates.

The E37S is an 83mm flat burr grinder and the E92 a 71mm conical grinder. These particular commercial grinders were selected, because of their potential suitability for the home environment. Both grinders are particularly short in the body **and not very deep,** for the burr size, making them good candidates for the average kitchen.

I want to make an important point right at the beginning, these are very expensive grinders and as such my review may be harsh in areas where I feel Ceado might do better. Please be aware all grinders have good and bad points, because this is not really a sales review, you will read both good and bad. This may conflict with other opinion on the web, if it does, it's because I am independent, have no owners goggles and I can send them both back. In addition Bella Barista would not wish to stock any high end grinder not meeting their standards at a sensible price.

Interestingly, Ceado aim these grinders firmly at the commercial market. I remember reading somewhere (I forget where)**, they had a panel of Baristas to help in their design, but I think they should have spread the net wider and included home users as well.** In my opinion a potential misjudgement, as the domestic market for good quality grinders is quite large and the perspective of domestic customers would have helped in both environments.

Many people modify commercial grinders to try and make them work better in the home environment. These modifications can sometimes improve a grinder which is not suitable for home use in it's standard form. The Ceado grinders being reviewed, have not been modified in any way and are working as intended by the manufacturer. Well in the end I couldn't help myself and did a minor mod on the E92.

Quite a bit of the usual information you may see on other web reviews is omitted from this review. This is not a sales review, I am trying to limit the review to information I think you really need to know to help you make a decision. I also cover the suitability, or not, of these commercial grinders in the domestic environment.

If you want to read the marketing "information", a quick search on the web will give you all the background and videos.

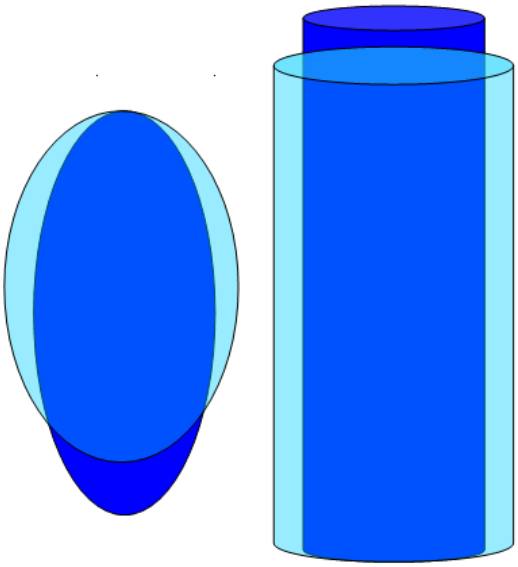
Specifications		
	E37S	**E92**
Voltage	220-240 V • 50-60 hz	
Power	400 W	900 W
Burr Life	600kg approx	1000kg approx
Rpm	1400 rpm	240 rpm
Gross weight	14,5 Kg	20,0 Kg
Dimensions	210dx280wx 550h mm	210dx280wx 630h mm
Burrs	Ø 83 (flat)	Ø 71 (conical)
Hopper capacity	1600 g	
Note	Additional voltage models available	
Dispensing	Timed, on demand/Doserless	

Note: Both grinders have only been evaluated for Espresso use over a 4 week period of the review.

© Bella Barista
Bella Barista, Nene Court, The Embankment, Wellingborough, Northants, NN8 1LD
Tel: 01933 273275 e-mail: claudettep@towability.com

CEADO E37S (83mm flat burrs)
This grinder is particularly small in the body and not very deep. It does come with a ridiculous sized hopper which almost doubles the grinders height to around 550mm. **Using the Mazzer Mini small hopper, it comes out at a far more kitchen friendly 43.5cm**, with a depth of only 290mm (right to the tip of the grounds catcher tray). To put this excellent sizing into perspective the Mazzer Mini E (a generally accepted kitchen friendly grinder) with it's small hopper is actually more than 3cm taller **and with it's grounds catcher tray, 50mm deeper!**

The graphic below shows the footprint of the grinders and grounds catcher tray (not the exact shape). The dark blue is the Mazzer Mini E and the light blue is the Ceado. E37S (with Mazzer short hopper).



It is clear that the Ceado E37S although wider is a little smaller and not as deep...surprising on a commercial grinder with such large 83mm flat burrs (a Mini E is 64mm). **The "small for type" dimensions were a key factor in selecting these 2 Ceado grinders.**

Finish and Packaging

The grinders come in a Sturdy cardboard box and the main packaging is shaped corrugated cardboard sections, folded to provide some rudimentary cushioning for the grinder. I actually dislike this packaging method (it's OK for the hopper only) and prefer shaped Polystyrene Foam in 2 halves to encase the grinder body. I think the cardboard method leaves the grinders slightly more prone to shipping damage and rubs marks in the finish.

The exterior finish can best be described as commercial, it's OK, but it's not the best I have seen and certainly does not reflect the much higher quality of the internals. If we remember this is a grinder aimed at the commercial market, this is not surprising**. One area where I think they could improve things is on the polished Aluminium areas, these could definitively do with an extra buffing step to remove the machine polishing lines. Paintwork should be of higher quality with less minor defects.**

Quality control

Looking over the grinder I could see that the rear screw for removing the top burr and adjustment assembly looked as if the screwdriver (factory assembly) had slipped very slightly....more on this later.

One of the screws for adjusting the grinding range of the slide lever adjuster, had a slightly chewed head (see photo). Please remember this is a new grinder

© Bella Barista
Bella Barista, Nene Court, The Embankment, Wellingborough, Northants, NN8 1LD
Tel: 01933 273275 e-mail: claudettep@towability.com

Another minor issue was the piezo electric beeper, an audible indication whenever a function is pressed. On the E37S it sounded like a weak cats "meow", on the E92 it sounded normal. If I had only had the E37S for test I might have thought this was how it was meant to sound, although **I have heard enough beepers to know the one on my E37S is not right.**

This is all basic quality control, it shouldn't happen on grinders of this price. Will it affect the grinders operation...no, but it's sloppy work and I don't like sloppy work. All employees assembling their grinders should have quality uppermost. If they chew up a screw head, they should remove it and put a fresh one in...NOT cover it up with the rubber collar and forget about it.

It's exactly the same with the beeper, it's clear the grinder had been factory tested, as there was coffee inside it. I personally could never let a grinder go out of the factory with a bad beeper. Yes, it works...but it's not perfect!

The rear bolt head on burr chamber cover slightly marked (probably imperceptible to the average customer). The key question is why is it marked, as if the screw driver slipped (spun a little in the head)....the answer; because it did slip! It slipped because that last bolt was a tighter all the way in than any of the others, tight from pretty much the moment it entered the hole in the lower burr housing. The reason for this is the basic design of the burr carrier, but it's actually a good thing (I will cover this later). **The person assembling or checking the grinder should have put a fresh bolt in (these things are inexpensive).**

So Ceado, improve your quality control please, it will cost you very little, in fact it's pretty much free and will benefit you in 3 areas.

- Improved product quality
- Reduced costs
- Better feedback to designers, resulting in improved design

Now I could say this slipped though and the faults were minor, it doesn't affect the operation of the grinder, probably just this grinder is affected and they usually never get problems like this reported to them. **That's up to you to decide**, because you will be the one spending a lot of money on an E37S. I just want to make sure Ceado read this and properly take notice of it.

General Operation

Noise Levels

Ceado claim this is a very quiet grinder and I have to agree with them. In fact I can confidently say this is by far the quietest grinder I have ever used (and I have used a lot).

Ease of use

This is a very easy grinder to use and the programming is simple. It's perhaps not as comprehensive in terms of the display compared to some other grinders, but it works almost exactly as it needs to. There are 3 modes of operation, with grinding initiated by pressing the portafilter against a metal push button..

- Press and hold for a timed grind, release to pause ("Pulse Off")
- Press for a timed grind ("Pulse On")
- Manual, press to start, release to stop, no timing.

The only slight annoyance in a home setting is the first setting, "Pulse Off". I realise they had a panel of baristas who fed back on the design, so this one surprises me a bit, as even in the commercial setting, I would imagine this would be annoying.

When the "press and hold to grind setting" is used "Pulse off", it decrements the time and finishes the dose when the timer expires. If you release the grind button it pauses and the remaining time to grind is shown. An excerpt from the user guide is below.

If this button is released during distribution of a shot, the motor stops, the system goes into pause status and the display shows the time remaining to complete the shot and the message "WORKING". In addition, to highlight the fact that the distributed shot has not been completed, the LED for the shot selected flashes. At this point, to complete the dose just press the start button (7 Fig. 1) again with the filter-holder and keep it pressed until the shot is completed.

© Bella Barista
Bella Barista, Nene Court, The Embankment, Wellingborough, Northants, NN8 1LD
Tel: 01933 273275 e-mail: claudettep@towability.com

The grinder will sit in this "paused mode" until it's switched off, or the particular shot button is pressed to reset the timer. If you have not noticed, when you next grind, you will not get a correct dose and have to part dose the remaining portion of the grind. Then remember to press the particular shot button again to reset the dose.... very annoying!

Now there is one small option missing from this function and for me personally it is a minor annoyance. A self reset of the grind timer, so if it's left in this paused mode, it will automatically reset the shot timer after a set period of time. If possible this should be added as an additional option, where you cans set the duration in seconds for this reset. 0 means no reset (same as current), or up to 99s.

In the commercial or domestic environment, this means:

- No more spoilt doses, because you didn't check before using (highly likely problem in the commercial environment)
- Less potential wasted coffee from incorrect dosing
- Less wear on the keypad in resetting the time
- Speedier operation

It also means that in the domestic environment, a short purge of the grinder does not have the irritation of having to remember to reset the timer.

Most of the other functions are pretty standard and there is a handy shortcut way to change the grind timers, without having to go through a long winded menu system.

Grind adjustment

The grind adjustment mechanism is nice, I like it a lot. It's easy to use and fairly clear, **although highlighting the numbers on the rubber collar in white for better visibility would be good**. I have seriously considered one of those white tyre pens to highlight the numbers myself!

The lever is fairly easy to move, when I saw the video I was a bit worried that it might be too easy to move, but no...it's exactly right. It's also very clear to see where you are.

Removing the rubber collar reveals the lever operated grind adjustment mechanism. Two small machine screws allow the lever to be set to any desired position for that level of grind e.g. middle position for a general espresso grind . The only thing to remember (as I don't think this is covered in the user guide), is always to choose 2 holes that are diametrically opposite to each other (shown in green), for the best operation of the adjustment system. The red arrows show where not to have the screws, even though a hole for one exists (this tip is not in the user guide).

There are enough screw holes so that this is always possible. And allows you to set the grind adjustment range wherever you need it.

One important point to make here, the grinder has a range of adjustment, the lever moves from about 8pm to 4pm. **This means it can be set for the full espresso range (or drip, carafe etc..).** To move from espresso to carafe, you undo the screws, move the lever position to the right, replace the screws and coarsen the grind by moving the lever to the left. Check the grind and repeat this process until the desired grind level is achieved. It's a grinder best set to the type of grinding you need, but it does give a very high level of control over the grind. **This limiting of range would be a normal feature of many commercial grinders**.

© Bella Barista
Bella Barista, Nene Court, The Embankment, Wellingborough, Northants, NN8 1LD
Tel: 01933 273275 e-mail: claudettep@towability.com

Dosing

The grinder itself is easy to use, the dosing system works well and is fairly accurate with only a small dose variance. Even when the level of beans in the hopper is fairly low e.g. just visible at the neck of the grinder, it doses well, with little "pop-corning". This surprised me a little as the grinder has a smooth domed nut and no auger.

There is a static/clump adjustment screw, where you can adjust the balance between more static and less clumps or vice versa. **There is no magic here, it's a metal flap to the burr chamber, on a hinge and a rubber sprung flap mechanism that presses on the metal flap with a pressure you can adjust.** More pressure = less static and slightly more clumps, less pressure means less clumps, but more static. I have left mine in the factory setting, as it seems to work well enough. There are some small clumps, but these resolve without any requirement to stir the grinds and mostly fall apart when touched or the portafilter is shaken.

In a coffee shop, when grinding directly into the portafilter, you probably won't mind a small amount of ground coffee dropping into the catcher tray below. However, if your a clean freak like me, you won't want ANY ground coffee dropping anywhere at all. This can be easily prevented with the use of a portafilter ring.

The 2 short Videos (links below), show this working.

http://youtu.be/ugjNM6qSS48

http://youtu.be/QD4SDKu9y40

Single Dosing

The practice of putting a measured amount of beans into the grinder, and grinding until no more coffee comes out. Many people like to single dose and although this grinder will support single dosing, the following areas should be considered.

Coffee tipped into the hopper won't stale very fast at all and can happily be there all day or longer. The grinder then is very easy to live with, with a 1.5 -2 sec purge to clear out stale coffee (espresso setting), before pulling a shot. This purge is only required for the first of a series of shots.

The burr chamber space holding ground coffee for the sweeper arms to push out, is **very** small and the arms move rapidly**.** Too light a tension on the anti clumping system, trying to limit the retained grounds below 2g, can cause ground coffee to exit the dosing chute in a fine jet, missing the portafilter. The anti clumping system should be set to it's minimum tension, just before this begins to happen. **If it does exit in a fine jet sometimes, increase the pressure on the anti clumping system (turn adjuster anticlockwise) until this ceases to happen.**

With single dosing you need to allow for the purge, and weigh out more beans than you need, then hope the purge is gram accurate and then grind into the portafilter. With the grinder being used in this way, dosing is not so accurate to time and it can be very awkward because you have to weigh everything, including the purge. For me life is too short for all this hassle and it never made much difference in shot quality. My confession is, I used to single dose for many years and even bought scales for doing this. Finally I came to my senses some years ago and stopped doing it, filling the hopper with enough beans for the day is fine..

Grind Retention

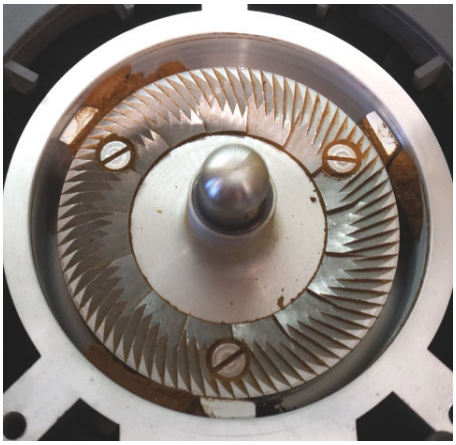
This is the amount of coffee trapped in the lower burr chamber, it has been ground, but remains in the grinder. Retained grinds are normally removed by "purging", grinding a small amount of coffee that is thrown away, before grinding into the portafilter. There is 2 types of retention for most grinders:

- The single dosing retention
- The normal use retention

Single dosing retention is what ground coffee is left in the lower burr chamber after repeated pulsing of the grind switch and brushing of the exit chute. **For the E37S it's approximately 2 - 3g, on an unmodified grinder, with the anti static/clumping mechanism in place...This is low for the class of grinder.**

© Bella Barista
Bella Barista, Nene Court, The Embankment, Wellingborough, Northants, NN8 1LD
Tel: 01933 273275 e-mail: claudettep@towability.com

In the photo below after single dosing, bushing the chute and pulsing the chamber until empty approximately 2 g of coffee is retained (verified by removal and weighing). This volume occupies around 38% of the burr chamber.



The normal use retention figure is when the grinder is always used with some beans in the hopper (or throat of the grinder). For the E37S it's approximately 5.5g - 7g. This may sound a lot, but it's actually very low for a grinder with such large 83mm burrs.

Anti clumping/static systems does account for a lot of this retention e.g. some Mazzers use a metal grid to control static, this can account for significant retention and when removed often reduces retention by 60% or more when single dosing.

Unfortunately removal of these devices, normally gives other undesirable **problems and does not significantly reduce retention when using the grinder normally e.g. with beans in the hopper and not single dosing.**

In normal use, the E37S only requires up to a 2 second grind purge (espresso setting) if it's been left more than 20-30m, because the burr chamber space is small with well designed sweeper arms. This will usefully remove most, if not all of the retained grinds within the burr chamber, ensuring the coffee in the portafilter is fresh ground. I say up to 2 seconds, because I have the grinder set really fine for my Vesuvius espresso machine, much finer than for a normal machine. You will find the retained figures and purge figures a little lower for a standard espresso grind.

Dose Accuracy

This was very good and consistent, even when very few beans remained in the hopper. I didn't notice much difference when pulling the last full double shot from the grinder.

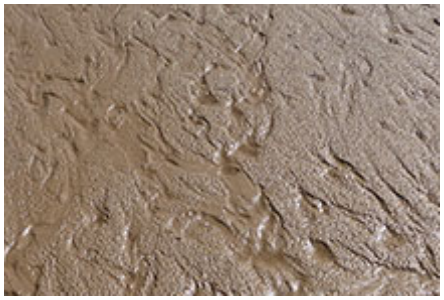
On my scales, accuracy was to within 0.5g per dose, but this might change depending on how tight you set the anti static/clumping system?

Grind Quality

The grind quality is excellent and even, with a tight particle distribution around the desired grind size and limited fines. This is backed up by the quality of the pour on a consistent basis and the taste and appearance of the espresso shot.

Pucks (the coffee in the portafilter after the shot), drain well and show little to no evidence of what I call "silting" even with extended 2 bar 12 second preinfusion times. Silting is a phenomenon that I have found occurs more with cheaper grinders and is worse when using machines with have extended preinfusion like the Vesuvius. In addition a larger space above the puck to the shower screen seems to make it worse, which is why a lot of people with very cheap grinders find themselves having to overfill the portafilter basket.

It's the situation where the fines in the coffee grind don't allow the water to soak through evenly and well. I also believe this shows the coffee in the portafilter may not be extracting evenly throughout the puck. I have inserted a photo of sand at the beach to try and illustrate the phenomenon, because none of my grinders do this on the coffee I am currently using.



Coffee pucks rarely look as bad as this, but may have some slight marks that are similar. The coffee puck drains well and is easy to knock out.

© Bella Barista
Bella Barista, Nene Court, The Embankment, Wellingborough, Northants, NN8 1LD
Tel: 01933 273275 e-mail: claudettep@towability.com

The actual espresso crema is an even rich colour with the extraction being very even throughout the pour, gradually changing from dark to light. There is nice dark flecking, with no sign of uneven extraction.

Taste is excellent for both single origin coffees and blends (which can be tricky), flavours come through clearly and are not muddy in any way. It has often been said that flat burrs have thin body compared to conical burrs, this was certainly not my experience with the E37S. The body in the shot was good and the overall taste experience, excellent.

Grinder Maintenance

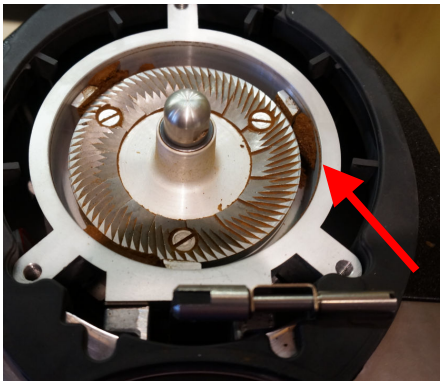
The E37S has a nice method of mounting the burrs, it's excellent quality and possibly a better design than other companies doing similar things.

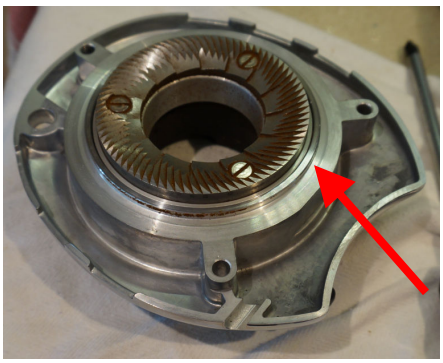
The burr chamber is split into 2 major housings holding the burrs. These are held together with 3 substantial cross head machine screws. The screws hold the housing together, but they do not act to locate the burrs relative to each other. This would create too much play and with wear, eventually the burrs would fail to line up accurately. There is raised sleeve in the top burr carrier that engages with a collar on the lower burr carrier, to ensure the burrs are absolutely aligned in the horizontal plane. The top housing has almost no play in any direction, making up to 2 of the machine screws a slightly tight fit, because as tolerances are so close. On my grinder 2 of the screws went in easy**, but the back screw (which had the slight damage on the head), was the tight one. With the tolerance this close, it's almost unavoidable to have 1 tight screw. I would imagine this is true of the majority of E37S grinders.** It doesn't matter, because that stainless steel machine screw will soon make up the few 1000ths of an inch, by wearing the softer aluminium upper burr carrier hole enough to become easy to fit over time. For me the important thing will be to remember to always fit the front ones first, take up the slack, then fit the rear one and tighten alternately finishing with the rear. **The key point is, the sleeve and collar on the burr carriers are what align the burrs, not the 3 machine screws**

The burr assembly and motor are rubber mounted and effectively form a single unit independent of the case. This also reduces the potential for burr misalignment, as the minimum number of aligned components are in the grind path, variance in the case will not affect burr alignment and neither will heat or impact.

The adjustment of the burrs themselves is via movement of the top burr assembly within a threaded collar. The threads are extremely fine, but well out of the way of the coffee, so they don't get contaminated with grinds. In addition, the burr chamber can be accessed without having to unthread the burrs and the grind settings are not disturbed.

Apart from one or two little things, this is probably the best motor/burr assembly method I have ever seen from an engineering point of view. It's simple, robust and has a minimum potential for variation in burr alignment.





Cleaning is a procedure that only takes a few minutes. Remove 3 machine screws, vacuum out the chamber, clean with a brush, close the chamber up and replace 3 screws. All your grind settings remain unchanged and with NO chance of cross threading a burr carrier as in some other grinders.

© Bella Barista
Bella Barista, Nene Court, The Embankment, Wellingborough, Northants, NN8 1LD
Tel: 01933 273275 e-mail: claudettep@towability.com

What could be improved

This grinder is good, but nothing is perfect and there are some improvements Ceado should consider.

- "Pulse Off" setting of start button, to auto reset grind time
- Electronics bypass
- Hex socket machine screws to be used, not crosshead
- Protective clear plastic disk around start button
- Supply with or without hopper
- Clearer numerals for grind settings
- Longer non commercial warranty
- Better on/off switch

"Pulse Off" setting auto reset

The "pulse off" setting is a great setting, it allows you to set up timed dosing and stop the dose at any point by moving the portafilter from the grind button. The dose can then be continued by pressing the grind button again. **This useful function should have an auto reset (configurable) if grinding is not continued after some seconds.** Without such a reset function, it's easy to leave the counter in the partly ground state and give a reduced dose to the next person using the grinder. In a busy cafe or coffee bar, I would think it unlikely any barista would check the grind time in case they needed to reset the dose. It's a minor annoyance, but for me, with the grinder costing this much, it's something that Ceado could usefully address.

Electronics Bypass

Ceado some years ago had some bad feedback on web sites about the quality of the electronics. Ceado told me this has been addressed, even so, the lack of a bypass mechanism for the timed dosing electronics seems like a serious omission for 2 reasons.

1. If you have had some bad PR about your electronics in the past, I would have thought a bypass would be a priority.
2. If you buy a grinder for the commercial environment, you want 0 down time. So minimising the impact of failure is important.

This bypass is quite a simple idea. They use a 3 position switch on the grinder. Off/Manual/Auto. In the **manual** position the switch allows the grind button to connect directly with the SSR (Solid State Relay) used to apply power to the motor and grinding starts when the portafilter activated button is pressed and stops when it is released.

The Auto Position operates as the on switch does now and utilises the full electronic functions of the grinder.

This change would be extremely easy for Ceado to make to their grinders and it's difficult to understand why they have not done this before, as reliability in the commercial environment would be improved.

Hex Head Machine Screws

The design decision to have the current "Phillips type" screws, probably assumes all users have screwdrivers with a perfect fit

This is a "Pozi", "Phillips" or "Crosshead" type machine screw.

My point here is, there are so many different types and with the variance in the screw drivers people use, **a correct fit is rarely achieved by end users**. This can cause the head of the screw to "cam out" and a good fit is hard to achieve from that point. In fact the original design of Phillips head screws was so that they would "cam out" with excess torque, as torque limiting power tools did not exist when they were invented.

© Bella Barista
Bella Barista, Nene Court, The Embankment, Wellingborough, Northants, NN8 1LD
Tel: 01933 273275 e-mail: claudettep@towability.com

The Hex socket machine screw, shown below, is a far better choice. **There is only one shape of hex socket (a hexagon),** it comes in different sizes and an incorrect size fit is immediately obvious. This is a fairly standard type, but they come in many head shape variants including countersunk.

The slotted head machine screws used in the grind adjustment mechanism (see earlier photo of damaged head), should also be replaced with hex socket machine screws.

This would give a better more positive fit and an Allen key could be provided specifically for the smaller grind adjustment range machine screws.

TORX is even more resistant to cam out and probably the best choice for the large machine screws, but not everyone has access to TORX bits.

Protective clear plastic disk around start button

This photo of the start button, from Ceados own Video, shows a lot of scratches. In the home environment this would irritate me and in the commercial environment, it's always nice to have the grinder looking smart.

Clearly it's from the portafilter hitting the painted finish, when busy Baristas are using the grinder. I would have thought a simple round piece of clear sticky back plastic, with a small hole in it for the press button would stop all this. A few minutes spent on the Internet and I found these 40mm clear adhesive discs (they also come in a range of diameters).

They need to be hole punched with a correctly sized central hole and the customer supplied with 5 or 10 in a strip.. Even at the cost I could buy them for, this would only cost Ceado approximately 12p for 10 discs. If they are a bit thin, a second disc can be applied over the first.

Supply with or without hopper (option)

To be completely fair here, Ceado do not aim their grinders at the domestic market, even though I think the E37S grinder fits the "high end" domestic market well. The standard hopper is "majestic", it's really big, so much so, it almost doubles the size of the grinder. When this was mentioned to Ceado, they did say that the hopper from the smaller grinder could be used...but that's pretty big as well. A nice small hopper to use with the E37S is the Mazzer Mini E small hopper. Fits perfectly and makes the grinder nice and small.

Ceado don't want to manufacture a very small hopper (unless it's in large volumes), **so they should consider supplying the grinder, with, or without a hopper (at a reduced price).** Retailers can add a small hopper if they want to and the pricing for the customer would be the best possible. No domestic customer wants to pay for a huge hopper they will never use.

© Bella Barista
Bella Barista, Nene Court, The Embankment, Wellingborough, Northants, NN8 1LD
Tel: 01933 273275 e-mail: claudettep@towability.com

Clearer numerals for grind settings

Perhaps I'm getting old, but the numbers on the collar are hard to see, black on black, doesn't show up well. Highlighting these in white would help a lot. It's something I'm even considering doing myself as a modification.

Longer non commercial warranty

WARRANTY

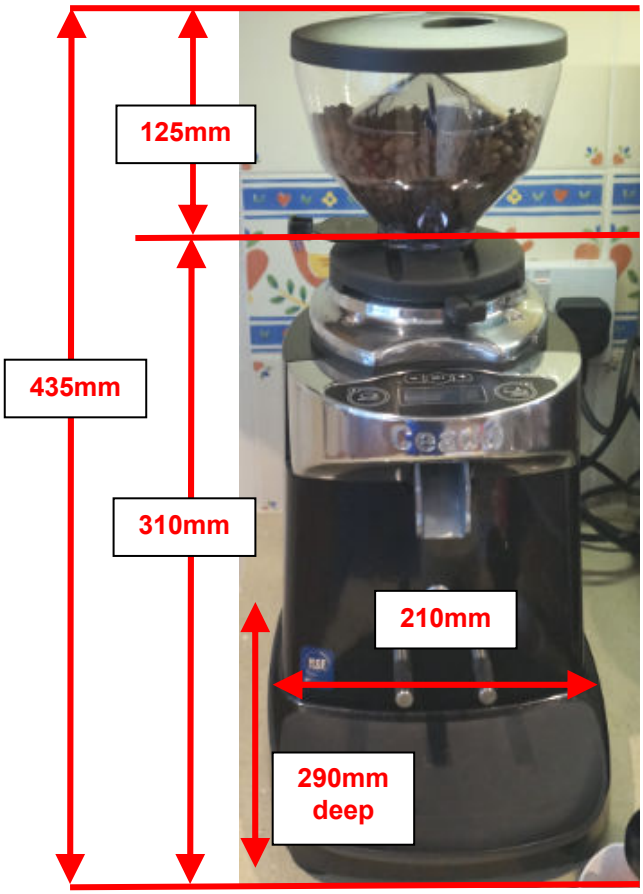
This product has been manufactured to a high quality standard. This product is guaranteed against faulty materials and workmanship for a period of three years from the date of purchase when it is used according to the instructions in this instruction and maintenance manual. Please retain any receipt as proof of purchase.

The above text comes direct from their instruction manual. I believe this is one of the longest warranties in the industry, usually grinders only have a 1 year warranty, rarely 2 years. Even so Ceado could do better. **The current warranty covers commercial use**. In the commercial environment a grinder can easily grind from 600kg to 1500kg of coffee in a year. **In the domestic environment, it's unlikely that the grinder will do more than 50kg per year. Why not offer a 5 year warranty for Domestic use and 3 year for commercial use?**

Better on/off switch

I could be completely wrong here, or very unfair to Ceado. The on/off switch may be completely fit for purpose, a switch may never have failed...but it just feels a little flimsy for a commercial grinder. It's the sort of switch I'd expect on the back of a hard disk drive, not a commercial grinder. OK, it's only switching a very small current, just to power the electronics, so it doesn't need to be beefy**, but it will go through a lot of on/off cycles**. Of course if they decide to go for a 3 position switch with a bypass option for the electronics, this switch would change anyway.

Dimensions(with Mazzer Mini hopper)



Conclusion

The Ceado E37S is a very nice compact grinder, it produces an excellent grind and is very easy to use. Internally it all looks to be very high quality and grind speeds for a normal espresso grind would be in the region of 5.6 to 6s for an 18.5g double shot. This is respectable and not too fast, something that's beneficial in the home environment. I personally believe grind quality can suffer when grinders grind too quickly for the size of their burrs. The functions on the grinder are good, but a few small additions would make it perfect. **It's also very quiet, a perfect top end large flat burr home grinder that is worth adding to your shortlist, as it has superb grind quality.**

© Bella Barista

Bella Barista, Nene Court, The Embankment, Wellingborough, Northants, NN8 1LD
Tel: 01933 273275 e-mail: claudettep@towability.com

CEADO E92 (71mm Conical Burrs)

This grinder is also particularly small in the body and not very deep. It does come with a ridiculous sized hopper for home use, which almost doubles the grinders height to around 630mm high. **Using the Mazzer Mini small hopper, it comes out at a far more kitchen friendly 51.5cm, with a depth of only 290mm** (right to the tip of the grounds catcher tray). Again the Mazzer Mini E (a generally accepted kitchen friendly grinder) is actually **50mm deeper with it's grounds catcher tray!** The fly in the ointment here of course is, the Ceado E92S won't fit under standard height kitchen cupboards, but it will go in front of them and still allow you to open the doors. I did briefly have a Compak K8Fresh which was about the same height, but a lot bulkier. It was so deep that you could not safely put in front of the cupboards on a standard countertop. The front rubber feet were only half on and the grinder body overhung the standard depth worktop**....but then a Compak K8 fresh with it's 83mm flat burrs is 400mm deep at the base!**

Finish and Packaging

This grinder also come in a Sturdy cardboard box and the main packaging is identical to the E37S, so the same issues apply

The exterior finish is identical to the E37S.

Quality control

This grinder has absolutely no quality control faults of any kind!

General Operation

Noise Levels

Ceado claim this is a very quiet grinder and I have to agree with them. In fact I can confidently say this is even quieter than the E37S apart from the cooling fan. This fan is just on all the time and I think fairly obtrusive. **I don't know why they didn't have it on a timer, to shut off if no grinding takes place for 5 minutes.** If using this in a domestic environment you would be wishing CEADO had put in a "fan off" switch for low volume use.

Ease of use

This is not such an easy grinder to use in the home. The controls and software is exactly the same as the E37S, the difficulties come in managing a large conical grinder with a high degree of retention.

Grind adjustment

The grind adjustment mechanism is identical to the E37S. It's easy to use (with the retention caveat) and fairly clear. The lever is fairly easy to move, when I saw the video I was a bit worried that it might be too easy to move, but no...it's exactly right. It's also very clear to see where you are.

Dosing

The grinder itself is very easy to use, nice and simple and the dosing system works well and is fairly accurate with only a small dose variance. Even when the level of beans in the hopper is fairly low e.g. just visible at the neck of the grinder, it doses OK, with no real "pop-corning". This was no doubt assisted by the little propeller on top which drives the beans downwards into the burrs.

Like the Ceado E37S there is a hinged metal flap from the burr chamber, but no adjustment screw, or tensioning flap. **The grinds have no evidence of clumps or static.**

Single Dosing

The practice of putting a measured amount of beans into the grinder, and grinding until no more coffee comes out. Many people like to single dose and although you can single dose this grinder, **it's not recommended when left as standard.**

© Bella Barista
Bella Barista, Nene Court, The Embankment, Wellingborough, Northants, NN8 1LD
Tel: 01933 273275 e-mail: claudettep@towability.com

Coffee tipped into the hopper won't stale very fast at all and can happily be there all day or longer. The main problem is grind retention and the difficulty of getting reliable shot, due to stale coffee in the burr chamber, mixing with fresh coffee.

Grind Retention

The burr chamber space that holds the ground coffee for the sweeper arms to push it out, is small for this class of conical burr grinder. The shape makes it deceptive, but with 4 (not the usual 2 or 3 sweeper arms) and a recess for the top burr carrier, it's a fairly small chamber. Even so the amount of coffee trapped in the lower burr chamber, is approximately 25g!

There is 2 types of retention for the E92 grinder:

- The single dosing retention
- The normal use retention

Unfortunately, because of the anti static/clumping flap at the exit of the burr chamber, these are identical at around 25g, because no matter how long you run the grinder, the coffee in the burr chamber does not come out. The photos on the right are after running it for 15 seconds or more after the grinder had no more beans to grind. The very slow grind speed does not generate sufficient centrifugal force to push all the grinds past the flap.

Single dosing retention is what ground coffee is left in the lower burr chamber after repeated pulsing of the grind switch and brushing of the exit chute.

The normal use retention figure is when the grinder is always used with some beans in the hopper (or throat of the grinder), no modification can actually reduce this on any grinder.

The only way Ceado could improve this is to have a manual opening lever for the anti static/clumping system. So that at the end of grinding a measured amount of beans (from a single dose), the flap can be manually opened and the grinder pulsed to remove as much of the ground coffee as possible from the burr chamber.

In normal domestic use, the E92 requires at least two double shot purges (37g), before the full change in a grind setting is realised, or mostly 100% fresh ground coffee is obtained.

In the commercial environment where the grinder is in constant use, this sort of heavy purging will not be required. The only time commercially where this 2 double shot phenomenon will be noticeable, is when adjusting grind settings. You can use a LOT of coffee dialling in the grind.

You may read on the internet much lower retained grind figures than mine on totally unmodified grinders. I don't know how people have come to this conclusion. I have opened the burrs, removed the remaining ground coffee and weighed it. I am also not including any coffee in the pre-crush zone of the burrs. Below is the photo of a full grind chamber and after I removed most of the coffee

I probably had just under 2 grams left in the chamber on the right. So adding that to the 23.3 grams I removed I make it around 25g

For domestic use, unfortunately, when you purge, you can't purge 25g, expecting to get all the 25g of old coffee out, followed by fresh coffee after that. It just not work that way. I would think you're lucky to get 12g of old coffee out with the first 18.5g you purge. With your second purge I would think 30% of the grind is of stale coffee in the burr chamber.

© Bella Barista
Bella Barista, Nene Court, The Embankment, Wellingborough, Northants, NN8 1LD
Tel: 01933 273275 e-mail: claudettep@towability.com

This means, that only after 37g have been purged is your double shot, likely to contain very little stale coffee. To put this in perspective, if you pull 5 double shots a day, you will to have to purge around 185g of coffee, which will go in the bin. **In the home environment,** 5 doubles in one day will use around 280g of coffee....with 66% of the ground coffee going into the bin!

Dose Accuracy

This was very good and consistent, even when very few beans remained in the hopper. I didn't notice much difference even when pulling the last full double shot from the grinder.

Grind Quality

The grind quality is excellent as long as you purge sufficient coffee. You may read on the web owners claims to only purge 5 or 10g. this is absolutely incorrect. I started off using the grinder by purging a full double shot 18.5g and I couldn't understand why the shot time seemed to vary sometimes. It was fine if I purged 18.5g, then ground another 18.5g for a double, but if I did 2 doubles in a row, the second double had a much slower pour.

I also found purging just 18.5g before grinding, produced an inferior shot, both in taste and appearance. I finally roasted up some really large batches of the same coffee to the same roast, so I had enough for a test...I grit my teeth and purged 37g before pulling my shot. It was a little better, than the 83mm flat burrs.

In fact the only time I could say the grinder was a lot better, was after 40g had gone through. Then the grind was almost completely clear of old coffee and the shot quality the best. So purging that amount would give the absolute best quality achievable.

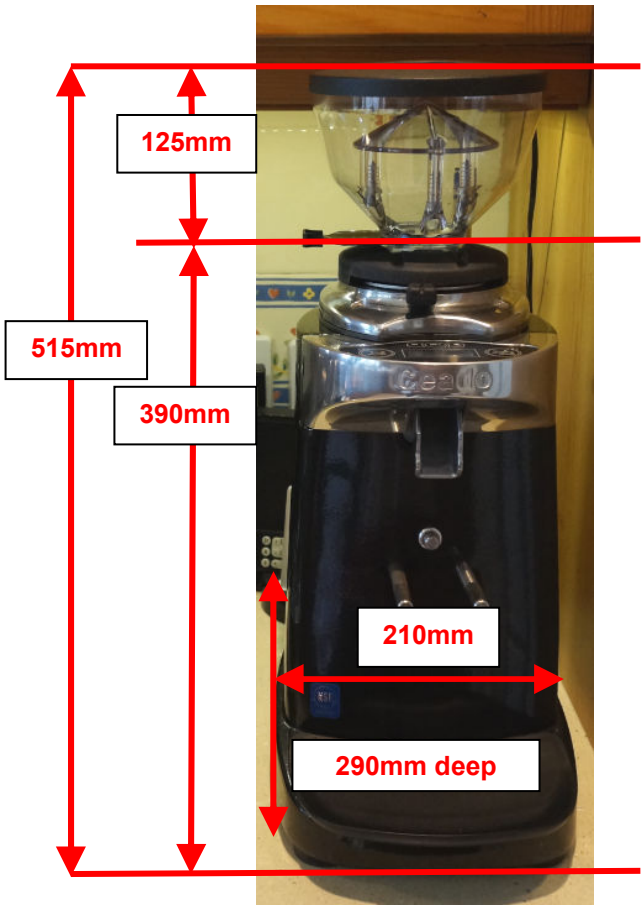
This for me in the domestic environment is a step too far and I personally would not be prepared to purge at least 37g and throw it away before I grind my double shot. Especially as the quality is no better or slightly worse (if enough coffee is not purged) than the E37S with a 6-8g purge.

Grinder Maintenance

The E92 is identical in it's maintenance to the E37S, with the only difference being the conical instead of the flat burrs.

Dimensions

The grinder is probably one of the smallest conical grinders available with 71mm burrs



© Bella Barista
Bella Barista, Nene Court, The Embankment, Wellingborough, Northants, NN8 1LD
Tel: 01933 273275 e-mail: claudettep@towability.com

It can be made even smaller by using a modified hopper (next photo). This was made from the top half of a tea brewing device. N**ow the grinder will easily fit under standard height cupboards, without any problems. I don't think you could say that about any other powered 71mm conical.** Also if you look carefully you can see some blue tape on a fixed metal post, indicated by an arrow. This is tape holding on a small magnet to defeat the magnetic safety switch and allow the grinder to work without the standard hopper. **This post makes the grinder 440mm high and is the minimum height of the grinder with a tiny modified hopper.**

Initial conclusions

I would have loved this grinder to be OK for the home, I really wanted it to work. **I have the option of purchasing either grinder and my heart would have loved what might be one of the better, if not the best conical grinders available.** However, for me, I just cannot justify the grind quality gains against the massive waste of coffee and the hassle of dialling in the grind when coffees change. I think if none of this matters to you, or you want to modify the grinder (removal of anti static clumping device), then perhaps it is the right grinder for you.

I personally wouldn't bother **(would I?)**, it's just too much hassle (or is it) to modify, single dose, pulse, sweep, pulse etc.. every time I want a coffee. Of course, you will read all the glowing comments on the internet, perhaps even ones stating that this review is completely incorrect. All I can say is please remember I had both grinders and could compare them side by side.

For the commercial environment it's intended for, It's a superb grinder, the commercial user would find hard to beat for; ease of use, great warranty, performance and grind quality.

So E37S (83mm flat) or E92 (71mm conical), are you buying either of them and why?

I have the option of buying either grinder, or sending them both back. I currently own a Zenith 65E, a grinder on a par with the Mazzer Super Jolly.

I did briefly have a K8 fresh on demand, but the size was a problem, worse still the burrs were misaligned and it didn't grind correctly. I have used or owned Mazzer grinders (Mini, Mini E, Super Jolly), other conicals and very large vertical flat burr grinders with specialist burrs..

I found the E37S surprising, it's grind quality is way better than my Zenith 65E. It's probably one of the best large flat burr grinders in it's class, delivering excellent quality in the cup. It's also the most kitchen friendly of any large flat burr grinder I have seen. I am buying the E37S, I should...this is the one I should buy, if I had any sense?

BUT!

I felt that I had to give the E92 a fair shake against the other conical grinders out there, because it is a really nice design. I know I said I was not going to modify the grinder, but I did!

A metal flap is the only grind control device the E92 has in the chute. It has some very slight resistance caused by a piece of rubber that presses down on the hinge and holds it in place. It's not resistance designed into it, it just creates some by virtue of the friction of holding it in place. If this flap is left, it's amazing how the grinds back up in the burr chamber...well you saw the photos on page 14.

© Bella Barista
Bella Barista, Nene Court, The Embankment, Wellingborough, Northants, NN8 1LD
Tel: 01933 273275 e-mail: claudettep@towability.com

Ceado E92 Modification

Removal of this flap definitely eases the potential compression of grinds in the lower burr chamber, personally, I could see absolutely no adverse effects after doing so. More importantly it allows you to get much more of the coffee out of the lower burr chamber after single dosing.

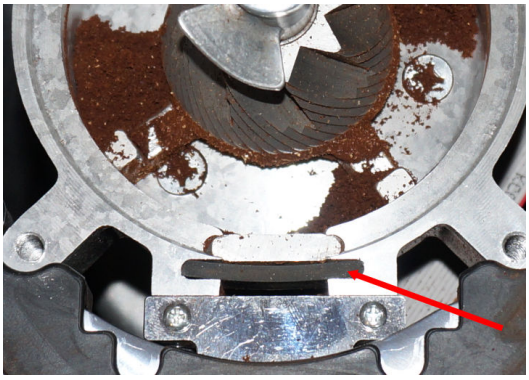
The grinder has one of the slowest grind speeds of any conical burr commercial grinder at 240 rpm, which does make it a slight hassle to use for single dosing, as at these speeds the centrifugal force to throw grinds out of the lower chamber by the burr sweep arms is reduced. However, the slower speed seems to help the grind quality, when there is not the weight of a hopper full of beans behind it. So on to the tests.

I cleaned out the burr chamber completely and placed 20g of coffee in the neck of the hopper and ran the grinder for around 20 seconds. I got 15.3g back out. What's left was below.

After removal and weighing of all the ground coffee including any left in the chute, the total weight of 4.7g was confirmed. I repeated this test 3 or 4 times and got some variation, from 4.7 to 8g. The main variation I did get was in the time to get all the coffee out, this is where the slow speed of the burrs does not help. It might give great grind quality, but it can take from 15 to 45 seconds to clear the burr chamber of all the coffee except for that 4 - 5g. **Note at this time I was not using a cupped hand to tap the top of the hopper I made and generate puffs of air (see later).**

Modification of a test machine of any kind is not my usual practice when writing a review, as the grinder is not being used as the manufacturer intended. However, I had 3 reasons for wanting to do this:

- I believe this Ceado Conical is absolutely the smallest most kitchen friendly, powered 71mm conical burr grinder there is.
- The only way other big conicals work in the home is like this, so I wanted to be fair
- I really wanted the big conical Ceado to be OK and to own a big conical grinder



Removal of this metal flap is a simple procedure. There is a little rubber bar, shown by the red arrow. It simply pulls out

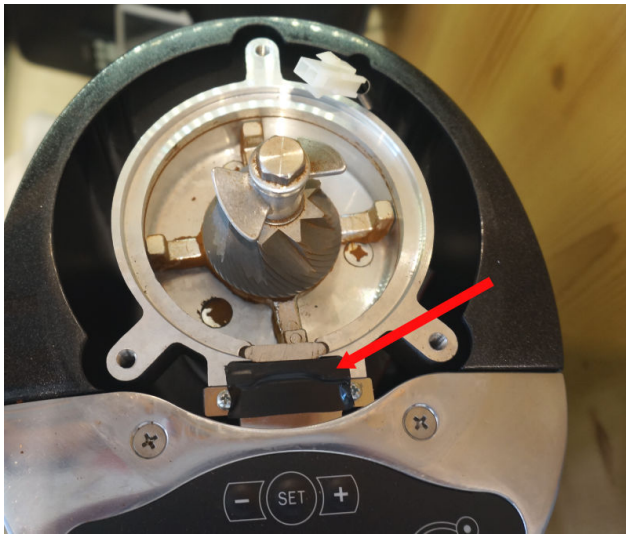
Underneath the rubber bar is the metal flap to the burr chamber, this just lifts out. I replaced the rubber bar only, mainly so I didn't loose it and because it seals the chamber. **Sure enough it does help seal the chamber and like a fool, I didn't notice the gap in front of the rubber bar. Well I did, but I thought the top burr carrier would seal it, it doesn't (see later).** Gently tapping the top of the hopper I made with my cupped palm whilst the grinder is running generates small puffs of air to encourage the coffee out. After I used it for a reasonable amount of single dosing, I opened the burr chamber to check the retention was like.

© Bella Barista
Bella Barista, Nene Court, The Embankment, Wellingborough, Northants, NN8 1LD
Tel: 01933 273275 e-mail: claudettep@towability.com

I was very surprised, the retention couldn't be more than 1 or 2 grams. Virtually no coffee was left in the burrs.

However, I did notice where ground coffee had been escaping the burr chamber, in front of the rubber bar. This was caused by the puffs of air to get all the grinds out. So I made my final small modification. A small piece of electricians tape across the gap. It's important to avoid the rebate the top burr carrier sits in!

In a few weeks I will check this and again in 3



months time, for any leakage, or lifting of the tape, but I am not expecting any problems.

The procedure for single dosing the Ceado E92

The single dosing procedure is not complicated, just a lot more hassle than I am personally used to, but I needed to do it, to assess:

- Is the hassle worth it
- Is the grind quality good, without loads of wasted coffee

With just a few grams left in the burr chamber each time, I really only need to purge around 4g if the grinder is left for more than 30 minutes. This almost guarantees the actual grind that follows will be 100% fresh coffee.

I place 4g of beans in the small modified hopper and grind them through, with the grinder set at 15s (or longer) for a double. This extended time is to ensure I get about 4g out and **gently tapping the top with the cupped palm of your** whilst the grinder is running is generates small puffs of air to encourage the coffee out.

I add my weighed amount of coffee....18.5g and I am looking to get all that 18.5g back out. This can take from 15 to 30 seconds, depending on how "giving" the grinder is feeling. It leaves a few g in the burrs again (for me to purge out next time) and the 18.5g I get back out is all fresh grind.

I have made a further modifications to reduce retention in the burr chamber and the time taken to remove all the coffee. It's 2g or less at the moment, this is totally acceptable.

The minimum height of the grinder is 440mm, because of the safety interlock post (2nd photo). With the "puffer mod", shown in the picture, it rises to 460mm. With a different black base piece, it could probably be reduced again to 440mm. As the Ceado rubber collar (57.5mm internal diameter) has grooves in it, for the Ceado hopper bean flap, you have to ensure that these are airtight. So my black base is mounted on the bottom to a 57-58mm clear plastic tube that enters the collar to a depth of around 15mm to create an air tight seal.

© Bella Barista
Bella Barista, Nene Court, The Embankment, Wellingborough, Northants, NN8 1LD
Tel: 01933 273275 e-mail: claudettep@towability.com

It's a 3 position collapsible camera lens hood (58mm fitting) inverted with a cap on the smaller top hole. This cap I will permanently glue, at the moment it's taped on from inside. I have the lens hood collapsed to the 2nd (middle position) so their is a bit of spring back and simply lightly tap the top, **with the grinder running, but after the beans have gone through the burrs.** If you tap too hard it simply collapses to the 3rd position and you have to reset it, this is useful as you don't want, or need, to tap too hard.

The burrs rotate so slowly that you need patience, not hard tapping to get all the coffee out, as it takes a little while to move to the edge where it can be puffed out. However, you can get almost all the coffee out, leaving perhaps 1g (measured by opening burr chamber and weighing what remains). For me the new routine is:

- 4g in, 15s grind and puff out about 4g
- 19g in 15s grind and puff, then a further 15s running the grinder and gently puffing the rest out.

It's a bit of hassle and I only bothered for 2 reasons.

1. The grind quality is the best I've ever seen on any grinder
2. It's really small for a 71mm conical, not just height, which is important, but in a way more important is depth. it's about 260mm deep to the tips of the front foot pads and 285mm to the tip of the grind catcher tray.

For me this means it can fit in front of my cupboards, with plenty of worktop left in front of the grinder and the doors easily open, handy because my cupboards have a lower pelmet which reduces their height at the very front. Without this pelmet, they would actually be the same height as the bottom of the door in the photo.

Note: I should add that having a significant weight of beans (or not) in the hopper, makes no difference at all to grind quality.

The grinder should not be used in the way I have mentioned and defeating the safety interlock system, is not endorsed by the retailer/manufacturer. I am sure it will not invalidate your warranty (why should it), but it's definitely not going to meet the safety criteria the manufacturer designed into the grinder.

© Bella Barista
Bella Barista, Nene Court, The Embankment, Wellingborough, Northants, NN8 1LD
Tel: 01933 273275 e-mail: claudettep@towability.com

Single Dosing Grind Quality (post modification)

In a word, superb, the grinder comes into it's own when used this way in the home. Pre modification it was a hard to adjust, massive retention, difficult to use grinder. Now, it's simple to adjust grind, the effects of which are seen immediately and the burrs are always empty, so you can adjust the grind without needing to run the grinder. The retention is minimal and the grind always completely fresh.

Grind quality I can only describe as excellent, it looks good, extracts well and the taste is fantastic. It's the best grind quality of any grinder I have used and I think it will get better as the burrs "run in" a little more. Ceado claim it only needs 4-5kg to season the burrs, but I suspect it's a little bit more than that.

Conclusion

Removing the flap in the exit chute and single dosing the E92 has a few advantages:

- The effect of grind adjustments are seen almost immediately
- only 5g of coffee is wasted for each double shot pulled.

I think these losses are completely acceptable for the improvement in grind quality.

The disadvantage is in time...as the whole grinding process takes far longer, but I guess that doesn't matter so much in the home environment. It would probably add around 1 minute extra to my total time to make a double shot of espresso.
If you decide to get one, then it's even more important for Ceado to offer a "no hopper option", because in the home you will have no use for a hopper.

E92 or E37S...it's a really difficult one for me.

E37S	
Pros	**Cons**
Very easy to use	Not good at single dosing
No need to single dose	
Cheaper	
Great grind quality	
Very small for 83mm burr size	
E92	
Fantastic grind quality	
	More hassle to use
	You have to single dose in home environment
	Much more Expensive
Very small for a 71mm powered conical grinder	
Very slow burr speed (240 rpm)	

Common sense would say get the E37S, the heart says "ah so what, it's a little bit of extra hassle to single dose, but it's a great 71mm conical burr grinder".

Well have a look at the photo on page 16, it's so small for a "Titan" Class grinder. I really don't believe there is any other powered 71mm conical burr grinder this small...not only the height of the body, but the depth of 290mm! **Of course I'm buying the E92, it's not the smart choice like the E37S, but I don't think I'll ever find anything else so kitchen friendly with such great grind quality. The heart ruled the head on this one, a rare occurrence for your reviewer!**

Note: I have not given full technical information in this review as this is all available from the rather nice Ceado web site (link below).

http://www.ceado.com/en/product/21.html

Note: It was a hard choice and if I could have afforded to, I would have liked to own both grinders.

© Bella Barista
Bella Barista, Nene Court, The Embankment, Wellingborough, Northants, NN8 1LD
Tel: 01933 273275 e-mail: claudettep@towability.com